

$M \times N$ image

$\frac{M}{2} \times \frac{N}{2}$ image

compressed data

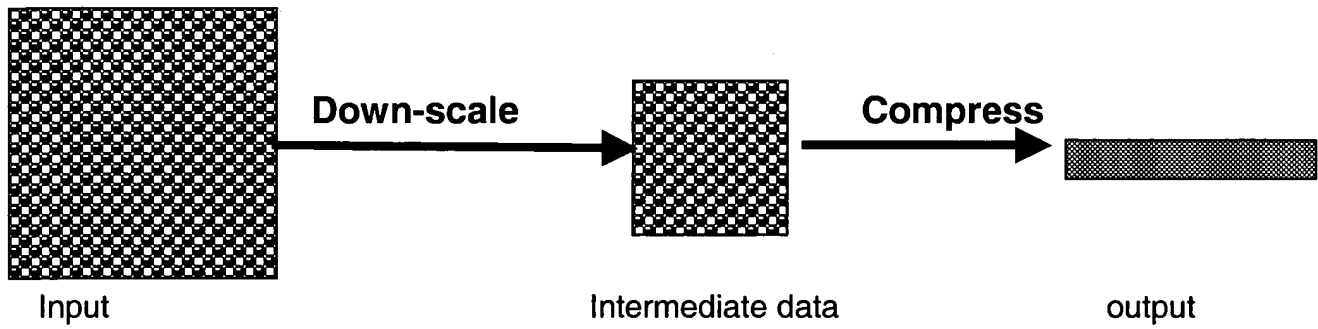


Figure 1

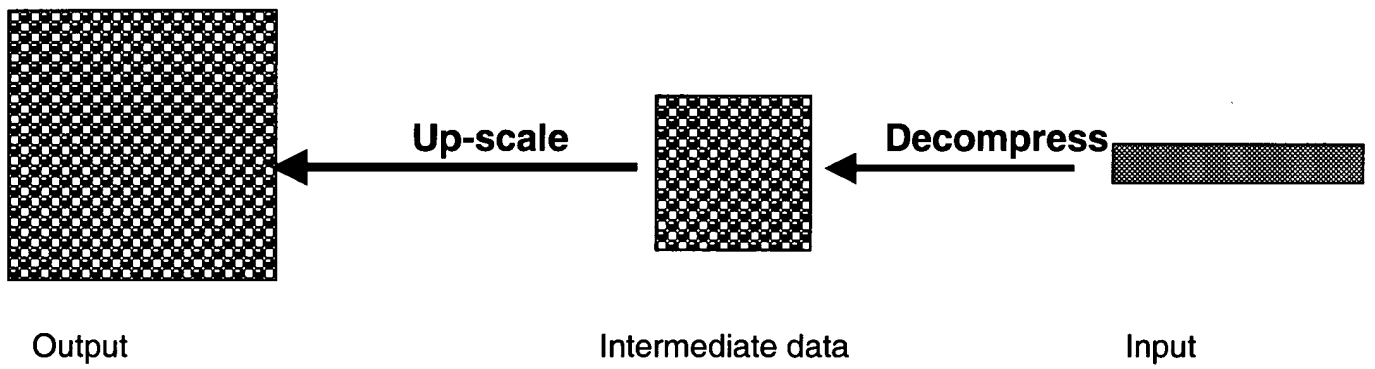


Figure 2

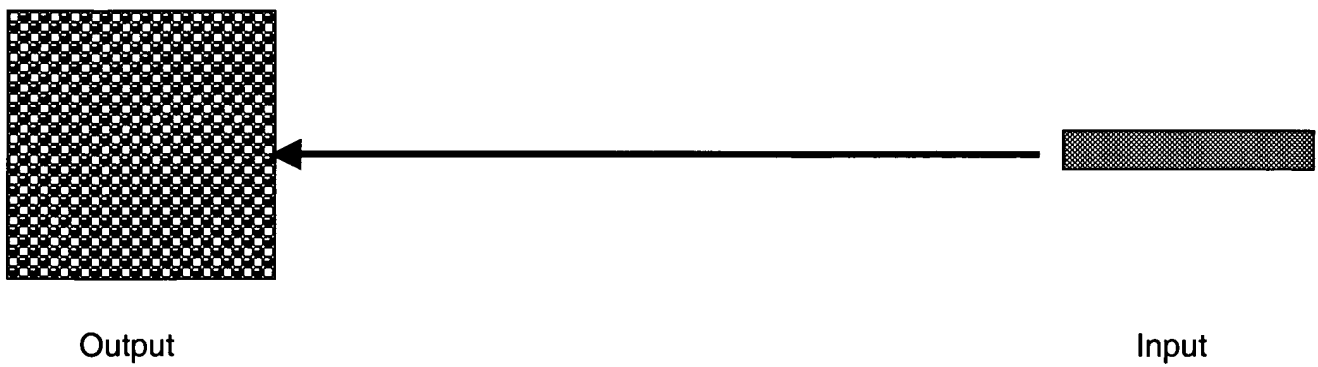


Figure 3

FOI 2025-042460

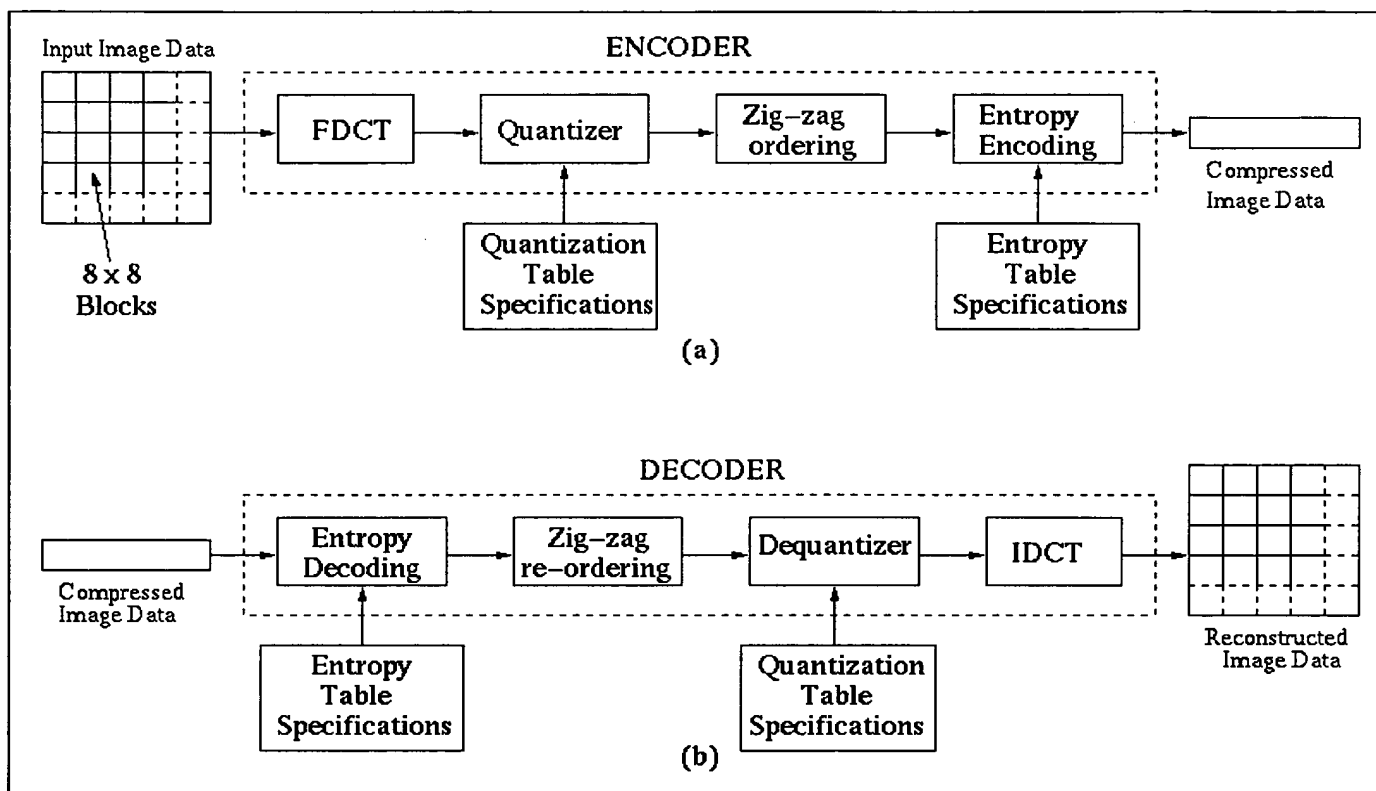


Figure 4

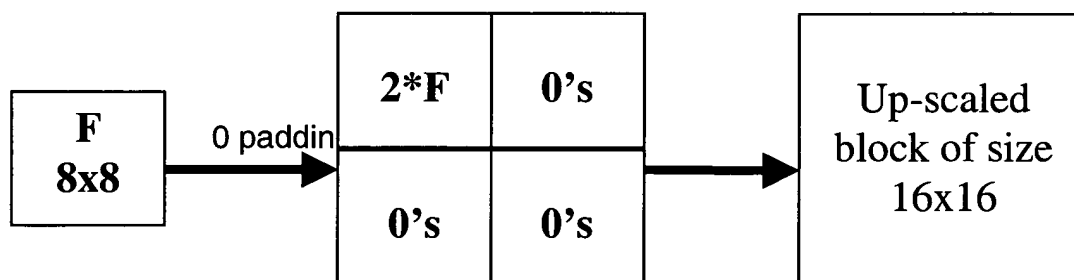


Figure 5

$$\begin{bmatrix} F(0,0) & F(0,1) & \cdots & F(0,7) \\ F(1,0) & F(1,1) & \cdots & F(1,7) \\ \vdots & \vdots & \vdots & \vdots \\ F(7,0) & F(7,1) & \cdots & F(7,7) \end{bmatrix} \Rightarrow \begin{bmatrix} 1.25F(0,0) & 1.25F(0,1) & \cdots & 1.25F(0,7) & 0 & 0 \\ 1.25F(1,0) & 1.25F(1,1) & \cdots & 1.25F(1,7) & 0 & 0 \\ \vdots & \vdots & \vdots & \vdots & 0 & 0 \\ 1.25F(7,0) & 1.25F(7,1) & \cdots & 1.25F(7,7) & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 \end{bmatrix}$$

Figure 6